

Adolescent Health and Development in the WHO European Region: Can we do better?



ABSTRACT

This publication supports adolescent health countries in the European Region to take action to improve their adolescents' health and development. It provides a rationale for investing in children 10–19 years old in the context of the Global Accelerated Action for the Health of Adolescents (AA-HA!) and investing in children the WHO European strategy for child and adolescent health (2015–2020).

Writing team: Eileen Scott (NHS Health Scotland), Ross Whitehead (NHS Health Scotland), Aixa Y. Aleman-Diaz (University of St Andrews) and Martin Weber (WHO Regional Office for Europe).

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Abbreviations

AA-HA!	Global Accelerated Action for the Health of Adolescents
CIS	Commonwealth of Independent States
CSE	comprehensive sexuality education
CSOs	civil-society organizations
DALY	disability-adjusted life-year
e-health	electronic health
EU	European Union
EU15	European Union Member States joining before May 2004
EU13	European Union Member States joining after May 2004
GSWCAH	(WHO) Global Strategy for Women's, Children's and Adolescents' Health 2016–2030
HBSC	Health Behaviour in School-aged Children, a WHO collaborative study
HEADSSS	Home, education/employment, peer group activities, drugs, sexuality, and suicide/depression (assessment)
HPV	human papillomavirus
m-health	mobile health
NGO	Non-governmental organizations
SDGs	Sustainable Development Goals
SEEHN	South-eastern Europe Health Network
SRH	sexual and reproductive health
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNCRC	United Nations Convention on the Rights of the Child
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund

Introduction

European adolescents (WHO defines adolescents as children and young people aged 10–19 years) are some of the healthiest in the world, yet significant opportunity to improve adolescent health and well-being remains across the WHO European Region. Adolescence represents a unique developmental window in which action to improve physical, mental and social well-being can have life-long consequences. If the Member States fail to act, an avoidable burden of death and illness will remain, distributed unequally across the Region, affecting current and future generations. Adolescence should be and can be one of the healthiest stages of life; we in the Region can do better.

This publication supports countries in the European Region to take action to improve their adolescents' health. Section 1 provides a rationale for investing in adolescent health in the context of implementing the Global Accelerated Action for the Health of Adolescents (AA-HA!) (1) and the WHO European strategy for child and adolescent health (2015–2020) (2). Section 2 analyses the main causes of mortality and morbidity within the Region, and section 3 outlines a process to support action.

Key messages

- Investment in adolescent health is key to meeting the goals of the European child and adolescent health and development strategy and achieving the United Nations' Sustainable Development Goals.
- The majority of adolescent mortality and morbidity in the WHO European Region is preventable or treatable.
- Both investment and opportunities to promote adolescent health and well-being are needed.
- Key international strategies and action plans provide a framework for action on adolescent health, while international comparisons can support a case for action at the national level

Section 1.

Why take action on adolescent health and well-being?

Puberty initiates a second sensitive period in the development of health and human capabilities. Appropriate investments bring benefits during adolescence, across the life course, and into the next generation – Patton et al., 2016 (3)

Adolescents' 1 right to health is enshrined in the United Nations Convention on the Rights of the Child (UNCRC) (4), the most widely adopted human rights treaty in the world. It applies to all children, defined as individuals below 18 years of age, regardless of their race, religion or ability. All 53 countries in the WHO European Region are parties to it. Together, within and between nations, we must ensure that adolescents can fully exercise their rights.

A particularly strong argument for a focus on adolescent health revolves around the impact of this developmental window on adult health, well-being and economic productivity. Adolescence represents a sensitive developmental period characterized by rapid physiological and psychological development, a drive towards increased autonomy, experimentation and establishment of lifelong behavior patterns.

Adolescence sees the establishment of important social and cultural achievements and roles, including educational attainment, gender roles and relationships, transition to employment or higher education, and access to economic resources that become the foundation for later life health and well-being.

While investment in adolescent health can yield substantial benefits for population health and wealth (5) in the short, medium and long terms, the opportunities offered by targeting this age group have not yet been fully embraced.

Short-term benefits

The likely reason for a lack of focus on adolescents' health is the perception that this age group experiences good physical health and low mortality rates compared to infants and older adults. Relative to children and adults, however, this age group has a disproportionate risk of exposure to specific negative influences on its immediate health and well-being (see section 2).

Poor mental health in particular emerges as a substantial disease burden during adolescence (6). Adolescents' mental health is particularly vulnerable to internal and external forces, including rapid cognitive and somatic growth, changing family and peer relationships, exposure to digital media and school-related pressure. Adolescence represents an opportunity to promote positive health and well-being and build on health assets and reduce risk exposure (7).

Medium-term benefits

Adolescent experimentation is common and can be beneficial. Even transient engagement in some risk-taking behaviors, however, can lead to life-changing consequences, such as being involved in a road-traffic accident, becoming a parent, contracting a sexually transmitted disease or acquiring a criminal record. Further, half of diagnosable mental health conditions emerge before the age of 14, with 75% doing so by the age of 24 (8).

Good evidence indicates that both health-promoting and harmful lifestyle habits formed in adolescence persist into adulthood (9). Developing health-protective assets and health literacy is therefore critical during this period, as they empower adolescents with the knowledge, skills and motivation to make healthy choices (10).

Long-term benefits

Recent estimates suggest that economic investment in adolescent health is returned many times over from a life-course perspective (5). For instance, interventions targeting depression and anxiety in adolescence are estimated to yield around five times the initial cost (5).

Not investing in the health and development of adolescents relates and contributes to the vicious cycle of ill-health and socioeconomic deprivation. – Patton et al., 2016 (3)

Global context

All countries face the challenge of integrating multiple international health strategies and frameworks in their own political and cultural contexts. Investment in adolescent health is key to achieving the United Nations Sustainable Development Goals (SDGs) (11). The current generation of adolescents will be the adults of the 2030s. The action that we take now to protect and promote their health and well-being will determine the ultimate success of these international commitments to transform the world. Many of the SDG targets explicitly focus on adolescents; see the WHO fact sheet on child and adolescent health and the SDGs (12).

Alongside the SDGs is the Global Strategy for Women's, Children's and Adolescent's Health 2016–2030 (GSWCAH) (13). It focuses on the right to the highest attainable standard of health for all women, children and adolescents. GSWCAH includes 34 SDG indicators and others from related global monitoring initiatives.

The following key global publications also provide a basis for action on adolescent health.

1. *Global Accelerated Action for the Health of Adolescents (AA-HA!): Guidance to support country implementation (1)* is an initiative of seven United Nations agencies – WHO, the Joint United Nations Programme on HIV/AIDS (UNAIDS), the Educational, Scientific And Cultural Organization (UNESCO), the United Nations Population Fund (UNFPA), the United Nations Children's Fund (UNICEF), United Nations Women, and the World Bank – the Every Woman, Every Child initiative of the United Nations Secretary General's Office and the Partnership for Maternal, Newborn and Child Health. AA-HA! helps governments respond to the health needs of adolescents in their countries. The full document, with annexes and case studies; a summary; and a comic book, brochure and infographics are available [here](#). AA-HA! Annex 6 provides details of the linkage between the SDGs and GSWCAH (1).
2. *Technical guidance for prioritizing adolescent health (14)*, developed by UNFPA and WHO, aims to support countries to both advocate increased investments in adolescent health and to guide strategic choices and decision-making for such investments. It describes a systematic process for identifying the needs, priorities and actions for adolescents to survive, thrive and transform their societies.

The European Region is unique in its commitment to adolescent health through its strategy for children and adolescents.

3. European Member States unanimously adopted *Investing in children: the child and adolescent health strategy for Europe 2015–2020 (2)* in 2014. It prioritizes investment in protecting adolescents, promoting their health and well-being, and preventing disease.

Tackling depression and other mental health problems in adolescence is recognized as an integral part of addressing adolescent health in the European Region. The strategy builds on achievements from the 2005–2008 regional effort to protect and promote young people's rights (15).

To support the European strategy's adoption the Regional Office is producing guidance for countries aiming to develop complementary national strategies. Section 3 of this document provides an outline. Monitoring of the strategy's objectives started in 2015. The Regional Office published a series of resources to foster transparency and facilitate achievement of the strategy's goals by 2020. This includes a comprehensive monitoring report (16) and health policy article (17) from a 2017 regional survey (18), online country profiles of child and adolescent health (19) and a mid-term progress update, presented to the 2018 WHO Regional Committee for Europe (20). Appendices 2 and 3 of the monitoring report (16) explicitly link the SDGs and GSWCAH indicators to those used to monitor the regional strategy.

Summary

This section outlines the compelling arguments for investing in adolescence, which represents a second window of opportunity in the life-course, because it is the second decade in life and the second period of brain development after early childhood. This section also emphasizes the broad array of international commitments that countries in the Region have adopted, which provide frameworks on which countries can build. Finally, it describes resources available to support national action to improve adolescent health and well-being

Section 2.

The WHO European Region, a region of great contrast

To help countries prioritize areas for action, this section provides an overview of recent data on mortality and morbidity among adolescents in the European Region. The data below were obtained from the Global Burden of Disease study (21), which provides robust statistics disaggregated by country, age, sex and cause. See Section 3 Box 2 for additional sources of country-level data.

While the Region has some of the best adolescent health outcomes in the world, large inequalities remain between and within countries. This section highlights the variation in outcomes that exist between recognized country groupings to illustrate these contrasts. Such comparisons allow the clear identification of areas for further action.

Most of the 53 countries in the WHO European Region fall into four recognized country groups: Member States of the European Union (EU) before May 2004 (EU15); Member States of the EU since 2004 (EU13); the Commonwealth of Independent States (CIS); and the members of the South-eastern Europe Health Network (SEEHN). Other countries in the Region – Andorra, Georgia, Iceland, Monaco, Norway, San Marino, Switzerland and Turkey – do not belong to any of these groups. See Annex 1 for an overview of country grouping within these sub-regions.

Mortality

Deaths of adolescents in the European Region have declined substantially in recent decades. The annual number of deaths of 10–19-year-olds are estimated to have fallen from over 70 000 in 1990 (representing an all-cause rate of 53 per 100 000) to 31 617 in 2017 (30 per 100 000). Nevertheless, the remaining deaths are largely due to causes that are either preventable (e.g. road injuries) or receptive to high-quality health care (e.g. cancer and respiratory infections). Over half of all 10–19-year-olds' deaths in 2017 were attributable to the top 5 cause groups listed in Table 1.

Table 1. Top 5 causes of death in the European Region for 10–19-year-olds in 2017, by age cohort and sex

Males					
10-14 years		No.	% of all deaths	15-19 years	
1	Cancers*	1112	18.5	1	Road injuries
2	Road injuries	813	13.5	2	Self-harm
3	Drowning	559	9.3	3	Cancers*
4	Self-harm	416	6.9	4	Drowning
5	Lower respiratory infections	350	5.8	5	Interpersonal violence
Females					
10-14 years		No.	% of all deaths	15-19 years	
1	Cancers*	825	21.7	1	Road injuries
2	Road injuries	430	11.3	2	Cancers*
3	Congenital bith defects	281	7.4	3	Self-harm
4	Lower respiratory infections	273	7.2	4	Lower respiratory infections
5	Drowning	220	5.8	5	Interpersonal violence

Source: Global Health Data Exchange [online database] (21).

* Note that Cancers category combines all neoplasms, within which Leukemia and Brain and Nervous system cancers represent the highest cancer-related risk for adolescents, together representing around 9% of the total mortality burden in this age group.

Overall, more males than females die in adolescence: an estimated 21 250 males and 10 366 females died in 2017 (reflecting rates of 39 and 20 per 100 000, respectively). Most of this difference is due to males' higher rate of mortality from injury. For example, there were 8 deaths per 100 000 from road injury among 10–19-year-old boys in 2017, compared to 3 per 100 000 among girls.

Cause-specific mortality varies substantially across countries in the European Region (Table 2), with a particularly large contrast seen between the CIS and EU15 countries. The former show higher death rates for most causes, but particularly for liver diseases, lower respiratory infections and drowning. The rates of which are each at least 10 times the rate in EU15 countries, potentially reflecting cross-national differences in environmental safety and access to clinical care.

Table 2. Difference between CIS and EU15 countries in mortality rates for people aged 10–19 years

Cause of death	Rate (deaths per 100 000 population)		Ratio CIS:EU15
	CIS	EU15	
Cirrhosis and other chronic liver diseases	1.44	0.05	28.86
Lower respiratory infections	2.86	0.23	12.56
Drowning	3.54	0.36	9.90
Interpersonal violence	1.82	0.36	5.06
Epilepsy	1.51	0.30	4.98
Self-harm	5.91	2.30	2.57
Congenital birth defects	1.56	0.74	2.12
Cancers	6.20	3.03	2.05
Road injuries	6.00	3.74	1.60
Endocrine, metabolic, blood and immune disorders	0.36	0.52	0.70

Source: Global Health Data Exchange [online database] (2017) (21).

Note. Countries are ranked according to the ratio in mortality rate (per 100 000), CIS countries to EU15 countries. Numbers below 1.0 indicate a higher rate in EU15 countries. Numbers greater than 1.0 indicate a higher rate in CIS countries.

Morbidity

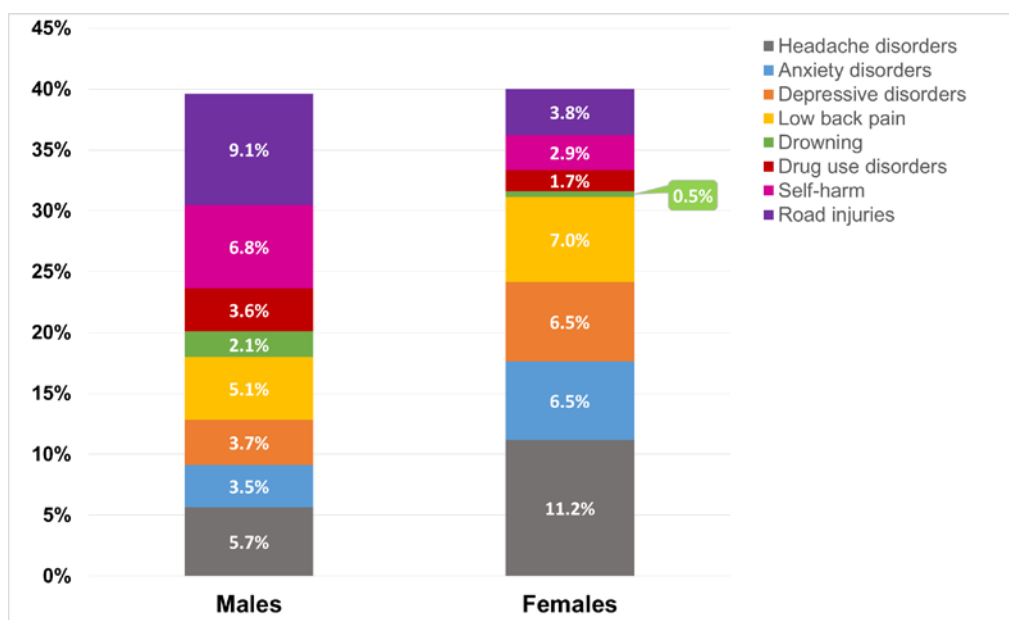
While death rates tend to be reasonably low among adolescents in the European Region relative to other WHO regions, there remains significant scope for a reduction in adolescent morbidity. One way to quantify the impact of ill health in a person's life, or to measure the burden of disease, involves calculating disability-adjusted life-years (DALYs), which represent an estimate of lost years of healthy life. Adolescents in the European Region lost an estimated 8.9 million years of healthy life in 2017 (21), which represents a 34% reduction since 1990 when 13.5 million years were lost (21).

In adolescence this burden is mainly associated with mental health, particularly anxiety disorders, conduct disorder, depressive disorders, self-harm, bipolar disorder and eating disorders. Collectively these accounted for over 20% of the total DALYs lost among 10-19 year olds in the European Region in 2017. Somatic pains (including headache and lower back pain) contribute to a further 13% of the total morbidity burden. Road injuries also contribute substantially to adolescent morbidity, representing around 5% of the total burden.

The burden on adolescents' health grows with age, increasing from 3.5 million DALYs amongst 10-14 year-olds to 5.4 million between 15 and 19. Particularly large increases are seen for road injuries which account for 3% of the total DALY burden at 10-14 years compared to 7% at 15-19 years. The burden of self-harm (increasing from 1% to 5%), and drug use disorders (increasing from 0% to 3%) also notably increases between these age groups.

There is little difference in the total morbidity burden between male and female adolescents (4.7 million DALYs lost vs 4.2 million). However, there are notable differences in the causes of DALY losses between sexes, particularly amongst older adolescents (Fig 1). These variations are likely to reflect differences in life experience, culture and gender norms alongside any biological variation. For instance, road injuries represent 9% of male 15-19 year olds' DALY losses, compared to 3.8% among females. Similarly a greater proportion of 15-19 year old males' DALY burden is due to self-harm (6.8% versus 2.9% amongst females). Females' DALY burden, on the other hand, tends to be greater for causes relating to mental health and somatic complaints (particularly headache, anxiety and depressive disorders), which collectively are responsible for 24% of 15-19 year old females' DALY burden compared to 13% amongst their male peers.

Fig. 1. Sex differences in the distribution of 15-19 year-old's morbidity burden



Source: Global Health Data Exchange [online database] (21). Values reflect the proportion of total morbidity burden (DALYs) for cause groups with the largest sex differences among 15-19 year-olds in the WHO European region (2017).

Mirroring the mortality statistics in Table 2, the morbidity burden differs substantially across the European Region. Some causes of healthy life-years lost are more prevalent in EU15 countries, particularly those relating to mental health (for example anxiety disorders are over twice as prevalent in EU15 countries as in CIS countries with rates of 634 and 274 per 100,000, respectively). Conversely, causes of healthy life-year loss that are particularly high in CIS countries (relative to EU15 countries) include self-harm, dietary iron deficiency, road injuries and interpersonal violence.

Health-related Behavior and Exposure to health risks

In addition, health-related behavior and exposure to risks to health vary according to age, sex and socioeconomic status. The data below comes from the 2014 Health Behavior in School-aged Children (HBSC), a WHO collaborative study (22). HBSC gathers nationally

representative data on the health and well-being of 11–15-year-olds within and outside Europe. Equivalent internationally comparable data on health behaviors for those aged 16 and over are lacking.

HBSC findings support the evidence highlighted above that morbidity increases with age during adolescence. Older adolescents reporting multiple physical and mental health complaints, poorer self-rated health, and less likelihood of reporting high life satisfaction. Older adolescents are also less likely to eat breakfast and fruit every day and to join family members for evening meals.

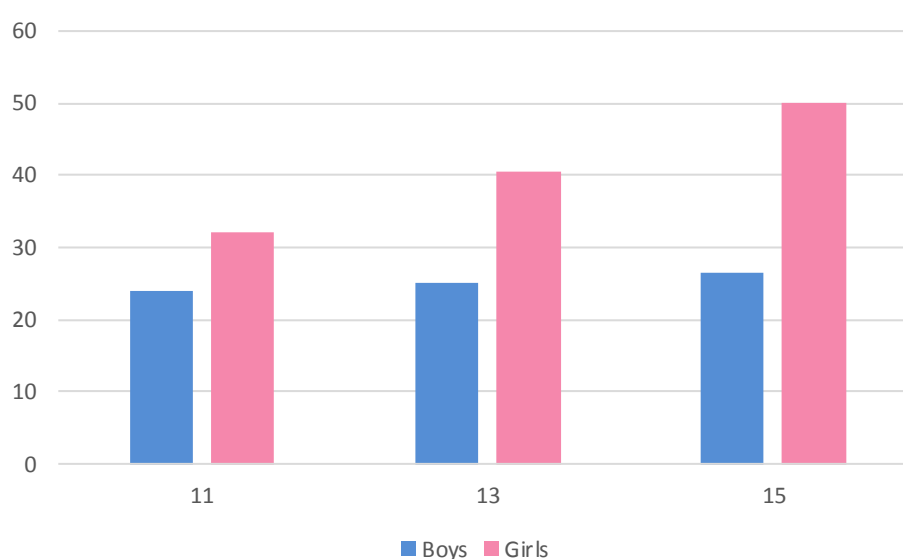
Older adolescents report lower levels of physical activity: for example, doing at least one hour of moderate-vigorous activity every day (25% of 11-year-olds but only 16% of 15-year-olds). Older adolescents are also more likely to engage in sedentary behaviors: 63% report watching two or more hours of television on weekdays versus 50% of 11-year-olds.

Among the most marked age-related changes in health risk exposure are those for alcohol and tobacco use. While around 1% of 11-year-olds report smoking once a week or having been drunk twice or more in their lives the corresponding figures for 15-year-olds are 12% and 22%, respectively.

Adolescent morbidity and risk exposure in the European Region show marked differences by sex. One sex is not consistently better off than another across the board, however different strengths and weaknesses are observed. For example, adolescent boys find it easier than girls to seek the help of their fathers about things that bother them, while girls are more likely to report high peer support.

Many of the differences in health-related behaviors and risk exposure apparent between adolescent boys and girls become more marked with age. For example, while the difference in having multiple psychological and physical complaints is small among 11-year-olds, it is much greater among 15-year-olds. At 50% for girls and 27% for boys (Fig. 2), the rate is almost double for girls. Similarly, a large gap in dissatisfaction with body image emerges with age: 43% of 15-year-old girls believe that they are overweight, compared to only 22% of boys.

Fig. 2. Proportion reporting two or more health complaints more than once a week by sex, 11–15-year-olds



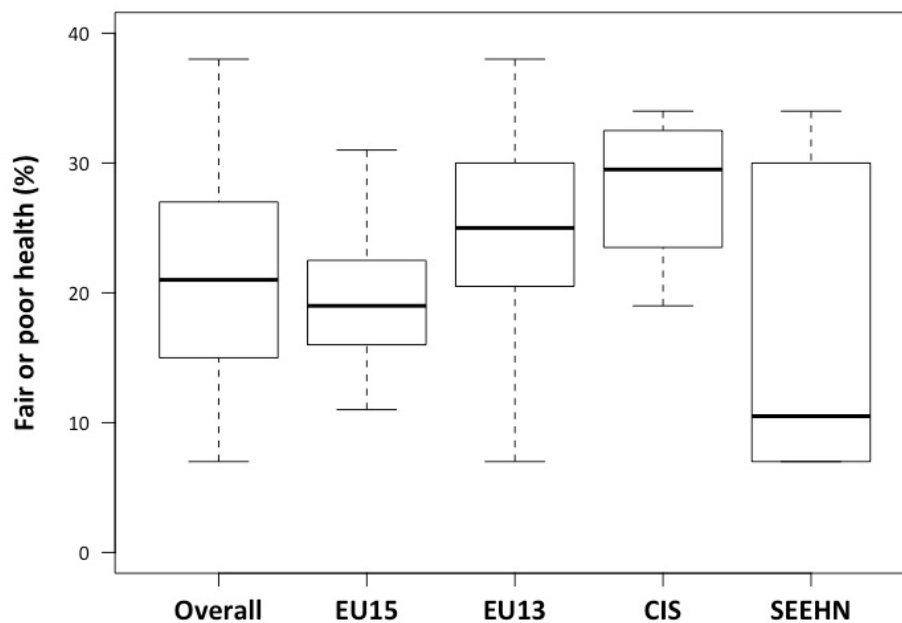
Source: adapted from data in: Inchley, Currie, Young, Samdal, Torsheim T, Augustson L et al. (23).

Note. Health complaints include headache, stomach ache, back ache, feeling low, irritability, nervousness, sleep difficulties and feeling dizzy.

The differences seen between boys and girls on health-related behaviors and risk exposure differences also vary across the four recognized country groupings in the WHO European Region. Based on indicators in the 2013/2014 HBSC survey, Fig. 3–5 below describe fair or poor self-rated health by 15 year old girls and boys. The thick black lines in each boxplot represent the median score of the respective country group. The thin black-lined boxes represent the interquartile range (the range that falls within 75th and 25th percentiles). The upper and lower dashed whiskers represent the maximum and minimum observed country averages.

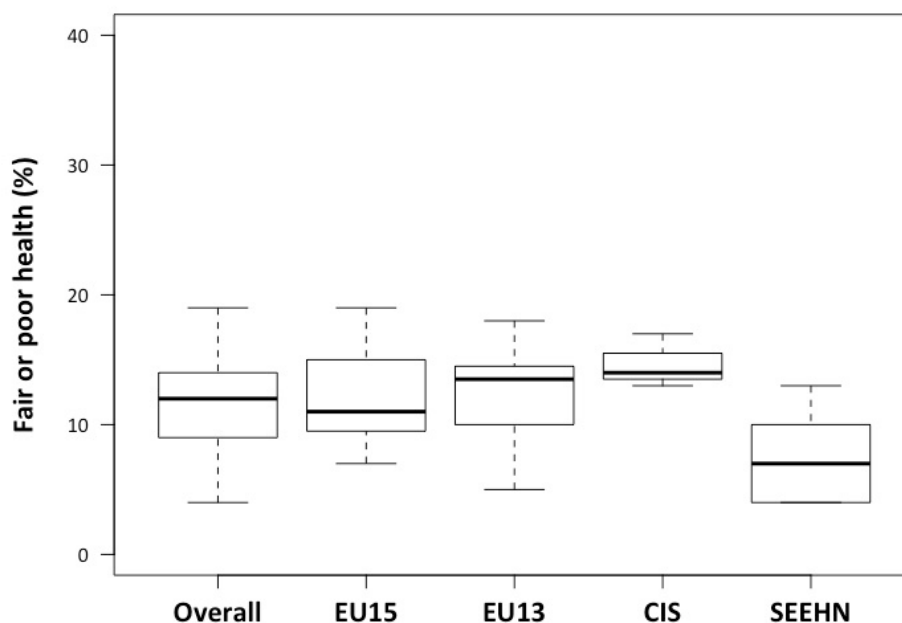
Fifteen year old girls in CIS countries reported higher rates of fair or poor health than those in EU15 countries (Fig. 3), and 15-year-old boys in SEEHN countries reported lower rates of fair or poor health than those in EU13 and CIS countries (Fig. 4).

Fig. 3. Fair or poor self-rated health, 15-year-old girls by country groupings



Source: Situation of child and adolescent health in Europe (16).

Fig. 4. Fair or poor self-rated health, 15-year-old boys by country groupings



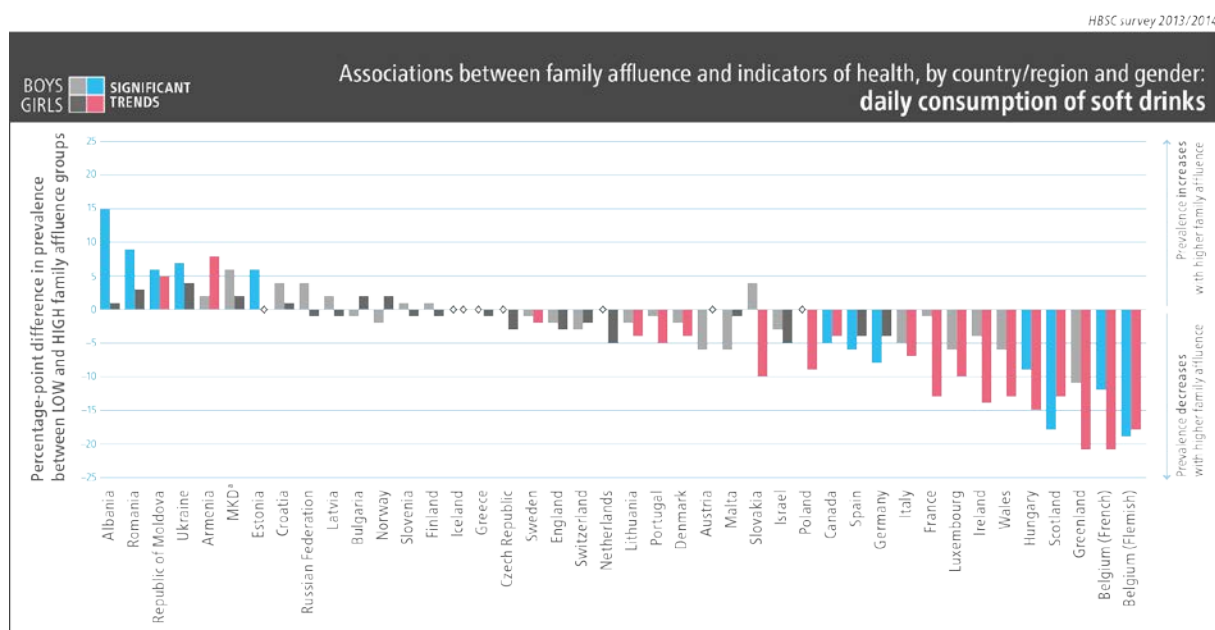
Source: Situation of child and adolescent health in Europe (16).

Boys aged 15 are more likely than girls to report having been injured (needing medical attention) at least once in the last 12 months: 47% and 37%, respectively. Broadly, adolescent girls appear to be more risk averse than their male counterparts and take more steps to protect their health. For example, adolescent girls are more likely to report brushing their teeth twice a day and are less likely to drink alcohol regularly or to be in a physical fight. Boys, however, are more likely to engage in physical activity than girls.

Socioeconomic status is one of the strongest determinants of adolescents' health, well-being and exposure to risk in the European Region. For many health-related outcomes and exposures measured by international studies, adolescents from more affluent families show lower levels of morbidity and lower exposure to risk factors. This includes indicators of both physical and mental health, where most countries in the Region see a difference of at least 10 percentage points in the prevalence of high self-rated health, high life satisfaction or health complaints between the most and least affluent in the country.

While many indicators for health differ by socioeconomic status, few show both positive and negative relationships with affluence across the different countries in the WHO European Region. Fig. 5 illustrates an example of such a contrast. While increased consumption of soft drinks is associated with lower family affluence in most countries, a smaller number of predominantly eastern European countries see the reverse association.

Fig. 5. Daily consumption of soft drinks by socioeconomic status, country and gender²



*The former Yugoslav Republic of Macedonia. Note: low- and high-affluence groups represent the lowest 20% and highest 20% in each country. ◊ means less than +/-0.5%.

Source: Inchley, Currie, Young, et al. (23).

Higher socioeconomic status shows consistent positive effects for tooth brushing, eating fruit daily and engaging in physical activity, as well as a wide range of aspects of social context that help to protect health and well-being, such as positive relationships with friends and family. The pattern of influence is less clear, however, for alcohol, tobacco and cannabis use, with higher socioeconomic status having a positive effect in some European countries and a harmful effect in others.

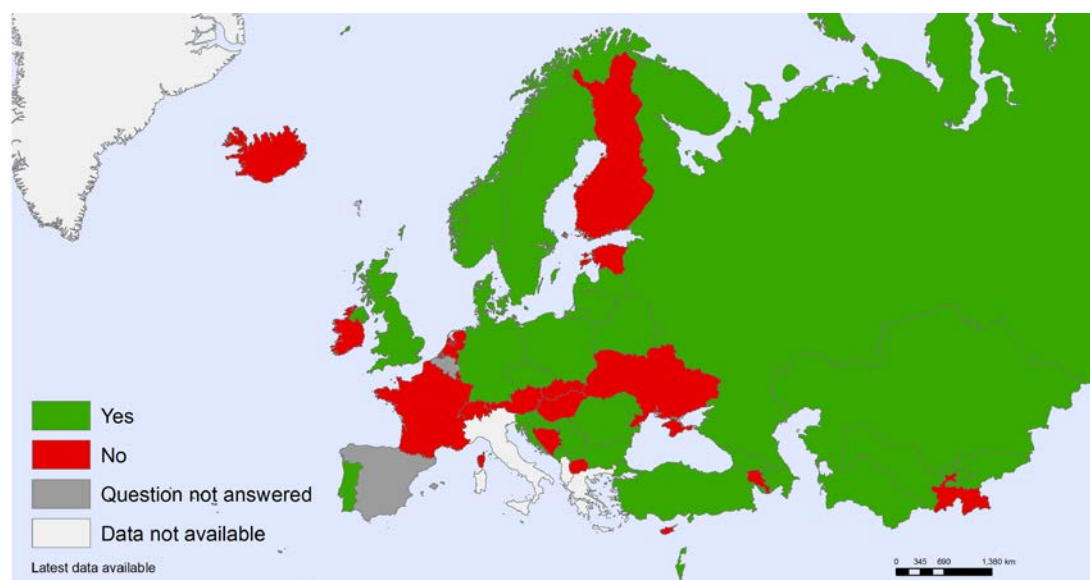
Health systems, policies and services

While the data presented above indicate that much is known about the state of adolescent health, a recent survey of the Region's health systems, policies and services (16, 17) identified a need for additional or finer-grained information.

Common issues can be found around the comprehensiveness of data collection. For example, limited disaggregation of available data (e.g. by migrant status, ethnic and socioeconomic background, or about staffing levels by geographic area), inadequate availability of data (e.g. for the treatment of mental conditions or vaccine coverage), inconsistent data collection for key indicators (e.g. about children who are institutionalized, victims of violence, or undernourished) or knowledge about existing national data sources (e.g. HBSC data on soft-drink consumption). Lack of disaggregation affects European countries' potential to identify inequalities and impedes their health systems' ability to support adolescents. Importantly, many of these aspects are also needed to support monitoring of global strategies such as the SDGs and GSWCAH (see section 1).

Differences between country groupings appear in areas such as governance, where more countries in the CIS are adopting national child and adolescent health strategies than others. Countries differ in how they analyse data for major intervention provision, with most doing so by sex (73%) and geographic area (63%). Fewer analyse by migrant status and ethnic background, with 13 and 11 countries in the Region disaggregating in this way (27% and 23%), respectively). EU13 and SEEHN countries report relatively low rates of analyzing data in terms of socioeconomic background.

Fig. 6. Adolescents' access to all health services without pay

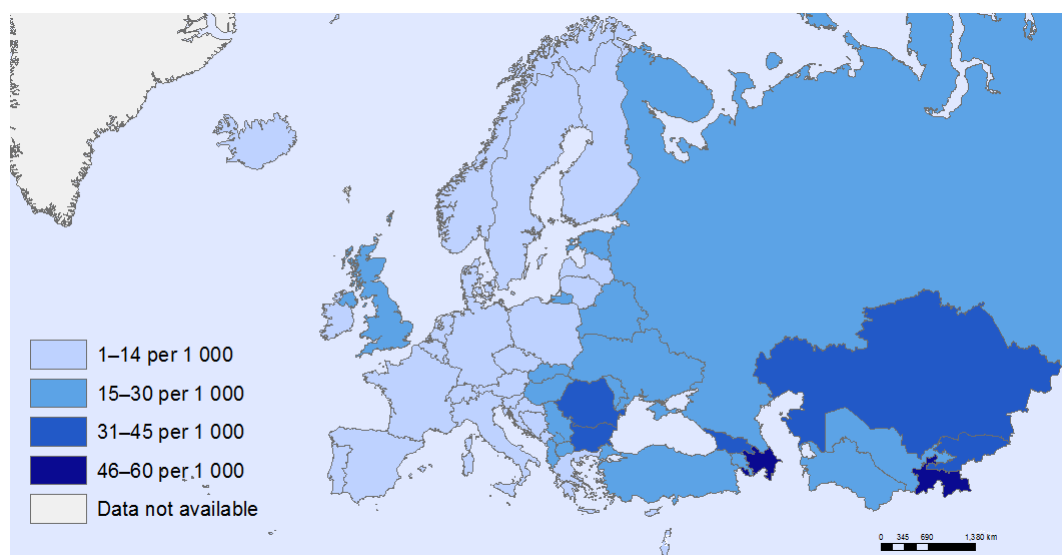


Source: Situation of child and adolescent health in Europe (16).

Regional differences are also seen adolescents' access to free-of-charge health services and sexual health provision (Fig. 6). Paying for services represents a hurdle for improving access to healthcare for adolescent across the region. Twenty countries in the region do not offer all services to adolescents without pay; EU15 countries are particularly divided in terms of offering free services to adolescents. In the context of sexual health, while 23 countries have policies on sexuality education in schools, 21 do not systematically track whether this education translates into adolescent knowledge on sexuality. Having age- and gender-appropriate education to address intimate-partner violence is slightly more common (30 countries), but these countries do not amount to two thirds of Member States. WHO recommends the human papillomavirus (HPV) vaccine for adolescent girls (24), to prevent cervical cancer, but half of SEEHN and 91% of CIS countries do not offer free HPV vaccination through their national programmes (Fig. 7). Further, the regions clearly differ in adolescent pregnancy rates (Fig. 8), which could be a reflection of the lack of policies around sexuality education in schools and the patchy availability of legal access to contraception or abortion without parental consent.

Fig. 7. Adolescents' access to free HPV vaccination

Source: Situation of child and adolescent health in Europe (16).

Fig. 8. Adolescent pregnancy rates

Source: Situation of child and adolescent health in Europe (16).

Summary

Adolescent mortality and morbidity have improved substantially in the European Region over the past three decades. Significant opportunities remain, however, to reduce the burden of preventable and treatable morbidity and mortality for this age group by improving the policies, systems, services, and supporting adolescent health.

The challenges and opportunities related to adolescent health vary, sometimes widely, across the countries in the Region. This means that combining data on causes of death and illness across the whole Region is often insufficient for identifying specific priority areas for action within a country. Section 3 provides a process to help countries set priorities and implement interventions appropriate to their own context.

Section 3.

Acting on adolescent health

To continue to improve the health and well-being of adolescents across the Region, we need to tackle the underlying causes of poor health. As highlighted above, addressing the consequences of living in poverty on development is crucial. Dedicated investment in adolescent health, well-being and rights, using an evidence-informed approach, is needed. This section is a guide for developing a national strategy or action plan³ in the context of the European child and adolescent health strategy, AA-HA! and the SDGs.

A dedicated, multi-sectoral national strategy or action plan that includes meaningful participation from children and young people can lead to effective action to improve adolescent health. Participation is their right, enshrined in the UNCRC. [Youth-friendly versions](#) of the UNCRC can support adolescents in understanding their rights within a framework to improve their well-being.

Box 1. Process for developing national strategy or action plan

1. Planning
 - 1.1. Commitment of key decision-makers
 - 1.2. Establishing initial priorities
 - 1.3. Undertaking a situational analysis
 - 1.4. Outlining the national strategy or action plan
 - 1.5. Stakeholder engagement
 - 1.6. Raising awareness of the need to strengthen action around child and adolescent health through a communications plan
2. Development
 - 2.7. Drafting national strategy or action plan
 - 2.8. Public consultation
 - 2.9. Finalizing national strategy or action plan
 - 2.10. Endorsement and launch of the national strategy or action plan
3. Implementation
 - 3.11. Integration into existing workplans, frameworks, and policies
 - 3.12. Allocating a budget
 - 3.13. Identifying interventions
4. Monitoring and evaluation
 - 4.14. Establishing an evaluation team
 - 4.15. Review and update

The WHO Regional Office has developed guidance to support the development of strategies for child and adolescent health which is outlined below. It covers planning and implementing plans, programmes and interventions, and strengthening national accountability. The strategy development process in four phases (planning, development, implementation, and monitoring and evaluation) with explanatory text to act as a guide through 15 sequential steps (Box 1 outlines the development process). Depending on a country's situation, it might be necessary to carry out some of the steps outlined in a different order or iteratively. While this section focuses on the national level, the principles of policy development and evaluation outlined can be adapted to inform action at the regional or local level.

Phase 1. Planning

1.1. Commitment of key decision-makers

For strategies and action plans focused on adolescents to succeed, the commitment of key decision-makers with the ability to influence their outcomes (e.g. lead and supporting ministries) is essential. Arguments included in section 1 and data in section 2 can form a basis for advocacy to national stakeholders on the importance of investing in adolescent health, development and rights.

Any strategy or action plan for this age group should be cross-sectoral, an approach that includes all other sectors that affect health, such as education, housing and justice. A cross-sectoral steering committee should be established to oversee the development of the national strategy and coordinate relevant working groups.

1.2. Establishing initial priorities

International

As the next step, countries should identify the priorities and goals of the regional and global health strategies that they have adopted, such as the European child and adolescent health strategy, the SDGs and GSWCAH.

At the regional level, the European strategy has four key priorities that give direction for national investment in adolescent health (2):

1. making children's lives visible;
2. addressing the unfinished agenda of preventable death and infectious diseases;
3. transforming the governance of child and adolescent health:
 - a. supporting early childhood development and growth during adolescence;
 - b. reducing exposure to violence and shifting societal approaches from criminal justice to preventive and therapeutic services;
4. protecting health and reducing risk:
 - a. achieving a tobacco-free millennial generation;
 - b. promoting healthy nutrition and physical activity through the life-course;
 - c. tackling depression and other mental health problems in adolescence;
 - d. protecting children and adolescents from environmental risks.

The data presented in Section 2 highlight specific areas for action across the Region, aligned with the priorities of the European strategy, particularly for data collection and analysis, sexual and reproductive health services, road traffic deaths, and positive health. Specific priorities identified for EU15 countries include a comparatively high burden of poor mental well-being. In the CIS, large discrepancies in mortality rates for drowning and respiratory and liver diseases, compared to EU15 countries, highlight major targets for preventive measures.

1.3. Undertaking a situational analysis

National

Individual countries also need to identify and address their own specific adolescent health priorities. This requires an understanding of the current state of adolescent health and well-being in the country. As in Section 2, this assessment must identify current adolescent health

needs and trends based on the best available data from routine information systems, surveys and programmes in the country. Box 2 below highlights sources of country-level data in Europe.

Box 2. Selected sources of country-level data

The WHO European Health Information Gateway hosts a number of regional databases that can support the assessment process, such as those listed here. The Regional Office developed child and adolescent health country [profiles](#) for all 53 European Member States that synthesize the best available internationally comparable data on child and adolescent health in the Region.

The Regional Office monitored implementation of the European child and adolescent health strategy through a child and adolescent health policies survey in Europe in 2017. The survey findings, including a comprehensive report (16) and health policy article (17), provide feedback on areas where improvements can be made nationally and in the Region. The data are available [here](#).

HBSC provides cross-nationally comparable data on perceived adolescent health and health behaviors. Conducted every four years since 1983, it facilitates trend analysis nationally and internationally. Data can be found [here](#).

AA-HA! recommends that landscape analysis (here called a ‘situational analysis’) should highlight the leading causes of morbidity and mortality, as well as the broader social, determinants of health, development and well-being. These issues may:

- be specific to adolescents or affect them disproportionately (e.g. scoliosis);
- affect adolescents less than small children but more than adults (e.g. malnutrition, diarrhoeal disease, or lower respiratory infections);
- be a major burden for both adolescents and the rest of the population (e.g. road injury);
- have major implications for adolescents’ future health (e.g. tobacco use, physical inactivity and poor diet).

The social determinants of health include educational and economic factors related to adolescence, including poverty and exposure to environmental risk. Health matters should be considered in the different settings where adolescents live and work (e.g. home, schools, health services and workplaces). The influence of gender norms that affect the health of both girls and boys during adolescence, and harmful cultural practices affecting adolescents (e.g. violence, weight stigma (25) and female genital mutilation) should also be considered.

Policy and programme landscape

Countries also need to understand the extent to which their existing policies, programmes, legislation, capacities and resources address adolescent health. This can identify gaps in policies, programmes or service delivery and can inform recommendations for solutions. It is useful to consider the following questions:

- What current policies and actions address adolescent health?
- How well do national policies targeting adolescents align with international priorities and goals?
- What resources (personnel and financial) are allocated to adolescent health? Is there a dedicated budget? Is distribution aligned with need for this age group?
- Do current programmes address the priority health issues identified for adolescents? If not, what are the gaps?

- How well can adolescents access health services and is uptake demonstrable? Is there a systematic difference between groups or regions? Is the quality of such services assured and evaluated?
- How are young people actively involved in programme design, implementation and evaluation?
- Are interventions for adolescents evidence-based? How is evidence used to further develop interventions targeting this age group?
- How are existing policies and programmes targeting adolescents monitored and evaluated? Is there robust evidence of positive impact?

Reports produced to answer these questions should aim to provide an overview of health issues and challenges affecting adolescents, along with areas of strength and success for them.

1.4. Outlining the national strategy or action plan

To provide a basis for engagement with relevant stakeholders and initial consultation, an outline proposal for the national strategy should be developed. It should make a case for action, supported by the information provided by the situational analysis.

1.5. Stakeholder engagement

A broad consultation process that engages relevant stakeholders needs to inform the development of a national strategy or action plan for adolescent health. These can be organizations, groups, department, structures, networks or individuals (Box 3). Including adolescents and the organizations that work with them is crucial. This engagement promotes ownership and trust in the final plan and widespread support for implementation. Involving adolescents should be considered a core part of the development of a national strategy or action plan. Their involvement can take many forms (e.g. in surveys, in planning, monitoring and/or evaluation) but needs a different kind of facilitation to be effective (16, 17).

Box 3. Key stakeholders

Key stakeholders include:

- adolescents;
- relevant national stakeholders for child and adolescent health policy and their areas of strategic focus and commitment;
- all the key interest groups, such as civil-society organizations (CSOs), parents, women and child health advocates, patients' organizations and churches;
- regulatory authorities or government agencies (e.g. for finance, medicines, education, equipment, housing, information systems);
- professionals from the relevant sectors, including CSOs and non-governmental organizations (NGOs) working at the intermediate and local levels (to be consulted and involved in the development and implementation process);
- professionals with expertise in monitoring and evaluation, evidence, data collection and analysis of complex policies.

Stakeholder mapping can support an engagement strategy that identifies how best to engage with different stakeholders; how to frame the national strategy or action plan message so that it is relevant to them; and to what degree a relationship needs to be developed to support the development process for the national strategy or action plan (26).

Box 4 provides a set of values that provide a framework for evaluating these efforts.

Box 4. Core values of participation

The participation process should:

- include the promise that participants- contributions will influence the decision;
- communicate the interests and meet the needs of all participants;
- seek out and facilitate the involvement of those potentially affected;
- involve participants in defining how they participate;
- provide participants with the information they need to participate in a meaningful way;
- communicate to participants how their input affected the decision.

Source: adapted from Start & Hoyland (26).

1.6. Raising awareness of the need to strengthen action around child and adolescent health through a communications plan

Raising awareness about the national strategy or action plan through a wide range of media is an important step. A communications plan can ensure that activities and results are communicated throughout the development and implementation phases.

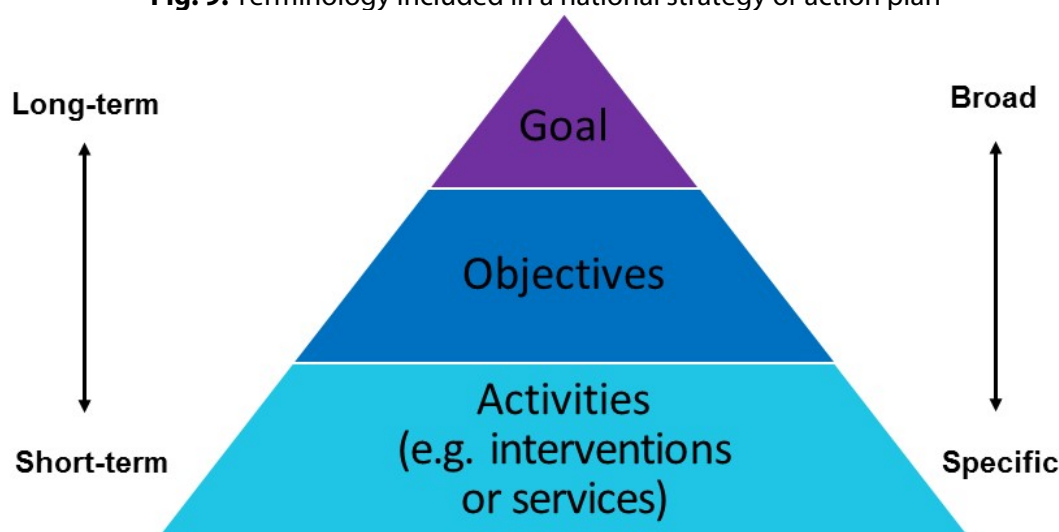
Phase 2. Development

2.7. Drafting the national strategy or action plan

Drafting of the national strategy or action plan for adolescent health should then proceed based on consultations with stakeholders, existing national priorities for this age group and the outcome of the initial situational analysis. The draft should:

- a. define overall goals for the strategy or action plan for adolescent health, development and rights and establish measurable timelines;
- b. define measurable short- and long-term objectives and targets for this age group, while recognizing that priorities may change during the implementation phase;
- c. select activities (e.g. interventions or services) that support the objectives and goals, ensuring that they are evidence-based and responsive to the situational analysis and the needs of different groups within the social and political context (see Section 3.13 for details);
- d. define responsibilities of institutions and establish coordination between all key players to ensure that adolescence is at the centre of their work;
- e. identify areas in existing work plans of relevant governmental departments and stakeholder organizations with which the national strategy or action plan for adolescent health and development could be integrated;
- f. define resource needs (e.g. budget, staff, training) and assess whether available resources can be shared across government; and
- g. define a mechanism for monitoring and evaluation using clearly defined indicators and resources secured for it.

Fig. 9 visually represents terminology in the national strategy or action plan. In the context of the European strategy a goal can be to transform the governance of adolescent health (see step 1.2 above). A relevant objective could be to support growth and development during adolescence with a related activity such as the adoption of adolescent-friendly services (see Table 4 and boxes 6 and 7 below) or implementation of UNCRC.

Fig. 9. Terminology included in a national strategy or action plan

Source: adapted from *Principles of Management* (27).

Research

While the sections above demonstrate that much is already known about adolescent health and well-being and potential interventions, new research is continually needed to challenge or supplement current understanding of adolescence. In particular, work is required to identify new areas for intervention, their level of effectiveness and the understanding of the circumstances in which to implement them. The WHO European child and adolescent health strategy (2) recommends research that increases knowledge on its priority areas, especially the third and fourth (See 1.2 Establishing initial priorities).

Adolescents' opinions should be considered in the setting of specific research priorities, as their insight into and interpretation of current knowledge can be revelatory. Participatory methods can also produce data that are meaningful to children and adolescents, reflect their lifestyles and are valuable to policy and programmes for them (22).

Box 5. Developing the pregnancy and parenthood in young people (PPYP) strategy in Scotland

In 2013, the Scottish Parliament's Health and Sport Committee held an inquiry into teenage pregnancy in Scotland, which at the time were amongst the highest among developed nations. Whilst Scotland had in the preceding years experienced decreases in teenage pregnancy, socioeconomic inequalities were rising. Young people living in the most deprived areas were 4.6 times more likely to experience a pregnancy, and nearly 12 times more likely to continue the pregnancy as someone living in the least deprived areas in Scotland. It was recognised that reducing levels of pregnancy in young people helps reduce the likelihood of poverty and a recurring cycle from one generation to the next.

One of the recommendations from the inquiry was the need for a stand-alone strategy for Scotland to further reduce teenage pregnancy, moving the focus away from a solely health-based agenda, and to continue to act on the wider determinants. In order to address this complex area, the strategy was developed using a collaborative approach; informed by an outcomes framework, developed with young people and guided by a multi-agency steering group.

Stakeholders were identified through a policy mapping, looking to see what other policies influenced or had potential to influence teenage pregnancy. An outcomes framework approach was then used to determine what the short, medium and long term outcomes of the strategy and what activities would be needed to achieve these. This was informed by review level evidence and plausible theory (where no or limited evidence was available). The outcomes framework was developed with stakeholders throughout the process and helped provide the backbone to the strategy.

Box 5. (cont)

Through the inquiry, the committee visited settings supporting young parents and talked to a number of young parents about their views around teenage pregnancy. During the development of the strategy, the policy team worked with a third sector organisation, Young Scot, to host a national online survey and four exploratory workshops to collect insights, ideas and experiences in order to inform policy and practice. Four workshops were commissioned covering rural, urban and island areas. However there was also interest from other established youth groups and young parents group who wished to contribute to the development of the Strategy. In order to ensure as many of these views as possible were captured, the policy team linked with local groups who wanted to host their own discussions around the content of the Strategy. The local groups used existing opportunities where young people were already coming together, to seek their views in an environment where they already felt safe and comfortable. A support pack was produced by the policy team in order to help facilitate the workshops and feedback was returned to the policy team in order to collate and use to inform the development of the PPYP Strategy.

The draft strategy had a formal public consultation period (12 weeks) alongside engagement events across the country. Sixty six responses were received from a wide range of individuals and organisations. A consultation analysis of the responses was written by an independent researcher and published on the Scottish Government website (28).

The PPYP strategy was published in early 2016 (29). An Equality Impact Assessment (30) and Child Rights and Wellbeing Impact Assessment (31) were also published to assess whether the policy defends protected characteristics within the Equality Act and will realise children's rights and help protect and promote the wellbeing of children and young people.

An implementation steering group was then formed alongside a monitoring and evaluation group. An evaluability assessment was undertaken to see what was evaluable and what method of evaluation may be best to be taken forward.

2.8. Public consultation

Public consultation gives the wider population, including children and young people, the opportunity to review and provide input to the development process (see Box 5). The draft national strategy or action plan for adolescent health and development can be shared and discussed by email, web-based survey or face-to-face meetings. The consultation phase should last about three-months and include discussions with focus groups of different stakeholders. Their responses should be used to refine the draft.

2.9. Finalizing the national strategy or action plan

The draft should be reviewed and the perspectives of different stakeholders incorporated. Integrating the views of young people, and the findings of the public consultation into the final version and its components is important. The final version of the national strategy or action plan for adolescent health and development will need to be shared with the larger group of stakeholders and members of the public. This may involve some reiteration of steps 2.7 and 2.8 (see AA-HA! Annex 3 (1)).

2.10. Endorsement and launch of the national strategy or action plan

The relevant national sector should publicly endorse and launch the strategy or plan. The steering group should ensure endorsement by all participating stakeholders and government sign-off. The content of the national strategy or action plan should be presented at a meeting to which the national health authorities and other key stakeholders are invited.

Phase 3. Implementation

3.11. Integration into existing workplans

Actions from the national strategy or action plan should be integrated into the existing work plans of relevant governmental departments and stakeholder organizations. Effective integration can ensure that adolescent health and rights permeate through all relevant documentation and become embedded in across sectors, levels and stakeholders.

3.12. Allocating a budget

The budget necessary to implement the national strategy or action plan should be allocated, including resources for the dissemination activities in step 1.6.

3.13. Identifying interventions

Support for growth during adolescence is a priority of the European child and adolescent health strategy. According to AA-HA! guidance (1), this requires action across sectors and levels that are:

... largely outside of the health system, e.g. family and community norms, education, labour markets, economic policies, legislative and political systems, food systems and the built environment. Working with parents, families and communities is especially important because of their great potential to positively influence adolescent behavior and health. The education sector also provides a critically important opportunity for intensive, long-term and large-scale initiatives implemented by professionals.

Achieving improvement in adolescent health outcomes requires the adoption of evidence-informed interventions that are selected based on robust effectiveness evidence and adequately resourced. Chandra-Mouli, Lane & Wong (32) note that:

Approaches that have been found to be effective when well implemented, such as comprehensive sexuality education and youth-friendly services, have tended to flounder as they have considerable implementation requirements that are seldom met.

These implementation roadblocks could be overcome with technical support from the regional office. Additionally, standards for sexuality education have been developed in the region (32) and global recommendations on adolescent sexual and reproductive health and rights have also been issued (32). These materials can provide background and ideas that can support evidence-based interventions. These can unlock the potential benefits from adopting approaches that have been proven effective over less effective but simpler interventions.

AA-HA! provides a comprehensive overview of evidence based interventions (see Fig. 8 of the [AA-HA! executive summary](#)) and illustrative case studies 4. It highlights that, despite important gaps in the evidence base of interventions to promote and protect adolescent health, countries have successfully implemented many interventions. Broad areas with a substantial evidence base, along with relevant case studies of their adoption in the Region, include:

- adolescent-friendly health services – Kyrgyzstan and the Republic of Moldova;
- laws on drinking age and blood alcohol concentration – Lithuania and Germany;
- addressing hotspots, interrupting the spread of violence, improving the built environment – Wales;
- pre-pregnancy, birth, post-pregnancy, abortion (where legal) and post-abortion care, as relevant to adolescents – Scotland and England.

It is vital that the adopted approaches take account of the impact of various levels of socioecological influence, which stretch from wider structural and environmental factors through organizational and community features to aspects of the adolescent's immediate social networks (e.g. friends and family), and finally factors intrinsic to the individual. Where national adaptation occurs, monitoring and evaluation are required to establish ongoing effectiveness. Tables 3–5 are adapted from AA-HA! (1) as examples of interventions at different levels, which target the priority areas identified in section 2 and are consistent with the European strategy's priorities. Each table is followed by European case studies from AA-HA! (Boxes 6–9) that place examples of these interventions into national contexts. Additional references to case studies can be found in Annex 2. For additional examples of interventions at different ecological levels please refer to AA-HA! Section 3 (1) and see available reviews published in recent years (e.g., 33–40).

Table 3 illustrates a range of evidence-based interventions, acting at various levels, designed to reduce morbidity and mortality associated with road injuries.

Table 3. Interventions to prevent road injuries

Level	Intervention	Further explanation
Structural	Drinking age laws	Raising the legal drinking age to 21 years reduces drinking, driving after drinking and alcohol-related crashes and injuries among youth.
	Blood alcohol concentration laws	Set a lower permitted blood alcohol concentration limit (0.02 g/dl) for young drivers than recommended for older drivers (0.05 g/dl). Enforce blood alcohol concentration limits, e.g. random breath testing of all drivers at a certain point, or only those who appear to be alcohol-impaired.
	Seat-belt laws	When laws requiring seat-belt use are enforced, rates of use increase, and fatality rates decrease. Although most countries now have such laws, half or more of all vehicles in low-income countries (LIC) lack properly functioning seat-belts.
	Helmet laws	Create mandatory helmet laws for two-wheeled vehicles and enforce them. Establish a required safety standard for helmets that are effective in reducing head injuries.
	Mobile phone laws	There is little information on the effectiveness of these relatively new driving interventions. However, 142 countries prohibit the use of hand-held phones, 34 prohibit hands-free phones and 42 prohibit text messaging.
	Speed limits	Roads with high pedestrian, child or cyclist activity should allow speeds no higher than 30 km/h. Limits should be enforced in such a way that drivers believe there is a high chance of being caught if they speed.
	Restriction of young or inexperienced drivers	A graduated licensing system phases in young driver privileges over time, such as first an extended learner period involving training and low-risk, supervised driving; then a licence with temporary restrictions; and finally a full licence.
	Restriction of availability of alcohol to young drivers	Reducing hours, days or locations where alcohol can be sold, and reducing demand through appropriate taxation and pricing mechanisms, are a cost-effective way to reduce drink driving among young people.
	Legal disincentives to drive unsafely	Make unsafe behavior less attractive, e.g. give penalty points or take away licences if people drive while impaired.
Environmental	Traffic calming and safety measures	Examples include infrastructural engineering measures (e.g. speed humps, mini-roundabouts or designated pedestrian crossings); visual changes (e.g. road lighting or surface treatment); redistribution of traffic (e.g. one-way streets); and promotion of safe public transport.

Level	Intervention	Further explanation
Organizational	Pre-hospital care	Standardize formal emergency medical services, including equipping vehicles with supplies and devices for children as well as adults. Where no pre-hospital trauma care system exists: teach interested community members basic first aid techniques; build on existing, informal systems of pre-hospital care and transport; and initiate emergency services on busy roads with high-frequency crash sites.
	Hospital care	Improve the organization and planning of trauma care services in an affordable and sustainable way to raise the quality and outcome of care.
	Rehabilitation	Improve services in health-care facilities and community-based rehabilitation to minimize the extent of disability after injury, and help adolescents with persistent disability to achieve their highest potential.
Community	Alcohol campaigns	Make drinking and driving less publicly acceptable; alert people to risk of detection, arrest and its consequences; and raise public support for enforcement.
	Designated driver campaigns	Designated drivers choose not to drink alcohol so they may safely drive others who have drunk alcohol. Such initiatives should only be targeted at young people over the minimum drinking age, so as not to promote underage drinking.
	Seat-belt campaigns	Public campaigns about seat-belt laws can target adolescents to increase awareness and change risk-taking social norms.
	Helmet campaigns	Educate adolescents about the benefits of wearing helmets on two-wheeled vehicles, using peer pressure to change youth norms regarding helmet acceptability and to reinforce helmet-wearing laws.
	Community-based projects	Community projects can employ parents and peers to encourage adolescents to wear seat-belts.
Individual	Helmet distribution	Programmes that provide helmets at reduced or no cost enable adolescents with little disposable income to use them. Distribution can be taken to scale through the school system.
	Motorized two-wheeler interventions	Promote use of daytime running lights; reflective or fluorescent clothing; light-coloured clothing and helmets; and reflectors on the back of vehicles to reduce injury.
	Cyclist interventions	Promote front, rear and wheel reflectors; bicycle lamps; reflective jackets or vests; and helmets to reduce injury.
	Pedestrian interventions	Promote white or light-coloured clothing for visibility; reflective strips on clothing or articles like backpacks; walking in good lighting; and walking facing oncoming traffic to reduce injury.

Source: adapted from AA-HA! (1).

Box 6 represents an illustrative case study of the positive interaction between alcohol interventions and road-traffic accidents, injuries and deaths. See Annex 2 for further case studies featured in AA-HA!

Box 6. Lithuania's use of routine data to monitor the effect of a year of sobriety

Routine clinic-attendance data proved very useful in detecting the effects of declaring 2008 to be a national year of sobriety. The rate of clinic attendances for treatment of the toxic effects of alcohol in 7–14-year-olds had consistently increased in each year from 2000 to 2007, but was substantially lower in 2008. A similar pattern was seen for road-traffic accidents, injuries and deaths.

Source: adapted from AA-HA! (1).

Table 4 provides an overview of positive interventions for adolescent health and development, organized by ecological level. Also see recent systematic literature reviews (e.g. 38, 39).

Table 4. Interventions for positive health and development

Level	Intervention	Further Explanation
Structural and Organizational	Adolescent Friendly Health Services	Health-care should be accessible and acceptable, promote health literacy and provide an appropriate package of services, including routine, age-appropriate appointments (e.g. vaccinations). Adolescent-friendly sexual and reproductive health (SRH) services are especially important, as stigma and discrimination prohibit adolescents from accessing them in many settings.
	Health Promoting Schools including health education	Make every school a health-promoting school in line with WHO guidance. Skills-based health education, including comprehensive sexuality education (CSE), focuses on the development of knowledge, attitudes, values and life skills needed to make, and act on, the most appropriate and positive decisions concerning health.
	Comprehensive School Nutrition Services	Establish and implement standards for meals provided in schools, or food and beverages sold in schools, which meet healthy nutrition guidelines. Implement school feeding programmes as needed.
	School hygiene interventions	Of the many changes during puberty, the United Nations Education, Scientific and Cultural Organization (UNESCO) considers menstruation to have the most pronounced effect on the school attendance, quality and enjoyment of education. Ensure girls have the materials they need for menstrual hygiene management. Safe water and sanitation facilities include lockable, single-sex, private toilets with water and soap for washing, as well as a suitable private space where girls can dry wet menstrual cloths and/or a closed bin or incinerator for used menstrual pads.
	Child Online Protection	Develop and implement a national strategy for child online protection, including a legal framework, law enforcement resources and reporting mechanisms, and education and awareness resources.
	e-health and m-health interventions for health education and adolescent involvement in their own care	Explore the potential of adolescent e-health and m-health interventions focused on particular issues (e.g. chronic illness management; SRH education, such as STI prevention), and employing a variety of approaches (e.g. web-based learning, active video games, text messaging and mobile phone or tablet software programme apps).
	Adolescent participation initiatives	Facilitation of adolescent participation includes involving them in programme design, implementation, governance and monitoring and evaluation.

Level	Intervention	Further Explanation
Community and interpersonal	Interventions to promote the 5 Cs (competence, confidence, connection, character, and caring)	Interventions to promote adolescent competence, confidence, connection, character and caring involve diverse approaches, including those focused on (a) increasing adolescent resilience (e.g. mentoring); and (b) building knowledge, skills and resources (e.g. educational programmes for at-risk youth; vocational training).
	Parenting or caregiver interventions	Work with parents to promote positive, stable emotional connections with their adolescent children, promoting connection, regulation, psychological autonomy, modelling and provision/protection. See guidance to health workers in non-specialized health settings on psychoeducation for parents to promote adolescent well-being. Parents can also be supported to communicate with their children about SRH, as a complement to school-based CSE.
	HEADSSS assessment	A HEADSSS assessment in primary care evaluates an adolescent's home, education, employment, eating, activity, drugs, sexuality, safety, suicidal thinking and depression status to prevent and respond to related concerns.
Individual	Brief, sexuality-related communication	Trained health workers should provide a brief, sexuality-related communication to promote adolescent sexual well-being, help them establish clear personal goals and address gaps between intention and behavior.

Source: adapted from AA-HA! (1).

Boxes 7 and 8 present illustrative case studies designed to support positive health development. Additional materials can be found in Gavin et al (39). See Annex 2 for further case studies featured in AA-HA!

Box 7. Kyrgyzstan's youth-centered care

In 2008, the Ministry of Health of Kyrgyzstan, with support from UNFPA and WHO, developed national standards for youth-friendly services with the long-term aim of improving the quality of existing primary and referral-level services across the country. To collect baseline data on the quality of care in facilities that expressed their willingness to apply the standards, a quality-measurement survey was conducted in 2009. Findings from 10 health facilities (seven public and three private) from five regions and are summarized here.

Most health-care organizations – despite the high level and extensive training of professionals, as well as the recognition of the importance of caring for adolescent health in general – are not ready to provide services to adolescents and young people in line with standards, including the extended package of services and referrals.

Explanations for young people's low uptake of services include low health literacy and level of confidence in the service due to lack of confidentiality and insufficient professional training in working with adolescents. Information materials for young people are either scarce or missing in all institutions, and there are no information materials on adolescent health for community members, parents and teachers. Health workers lack the skills to work with the community. While community members acknowledged that adolescents' need for support is worthy of public action, they do not see providing such support as their role, with either additional funding from the local budget or other forms of assistance. Parents, teachers and representatives of religious communities, however, recognize the need for high-quality adolescent-centered care and are willing to cooperate in promoting such services.

Many of the managers and providers of health care do not realize the importance of involving young people in promoting youth-friendly services, including among vulnerable youth. Services for vulnerable youth and adolescents are usually provided by clinics operated by NGOs.

Box 7. (cont)

Health-care organizations need to implement additional interventions in order to become youth-friendly, such as creating friendly spaces, training health-care providers in adolescent counselling and the principles of youth-friendly services, upgrading and supplementing equipment and ensuring a consistent supply of consumables. A package of normative documents on youth-friendly services is needed to guide specialists and managers.

The survey identified areas for improvement against each standard, assisting facilities to move toward adolescent centered care.

Source: adapted from AA-HA! (1).

**Box 8. The Republic of Moldova addressing adolescent health and development
in state medical university curricula**

People aged 10–24 years comprise more than one fifth of the 3.5 million people in the Republic of Moldova. Since 2001, a network of youth-friendly health centers has been established and gradually expanded to provide adolescents and young people with the services they need. To ensure that services are being provided according to national quality standards, it was crucial to address providers' competences in, for example, age-appropriate communication, confidentiality and integrated health risk assessment. For the first 10 years the initiative relied on in-service training, largely sponsored by donor agencies.

The country has only one medical university: the "Nicolae Testemitanu" State University of Medicine and Pharmacy. It provides university and postgraduate training, as well as clinical internships, residencies, and doctoral, postdoctoral and continuing professional education and training. To minimize reliance on donor funding, in 2014 a postgraduate training course for service providers (in-service training as part of continuing education) was developed, approved and integrated into the University curriculum for continuing medical education. This fifty-hour course is run jointly by the State Medical University and the "Neovita" National Resource Centre for Youth-friendly Health Services. Providers can choose this course as part of their five annual applications for continuing professional education.

Having a dedicated course on adolescent health in continuing professional education was an important achievement, and a key to sustainability. It was soon realized, however, that improving the structure, content and quality of the adolescent health component of preservice curricula is also very important. There were two reasons for this. First, this would ensure that every medical graduate – and therefore the future workforce – has basic competencies in dealing with adolescents. Second, the well-established primary care reform in the Republic of Moldova put the family doctor at the center of health-care provision. It is therefore important to ensure that every adolescent receives responsive care in primary care facilities, as well as youth-friendly health centers. Thus, targeting the adolescent-health component in residency training of family doctors is crucial. In 2014–2016, issues related to adolescent health and development were incorporated in postgraduate training in residency training of:

- family doctors (18 hours: 3 hours of theory and 15 of practical seminars);
- pediatricians (45 hours: 6 hours of theory and 39 of practical seminars);
- obstetricians and gynecologists (140 hours: 70 hours of theory and 70 of practical seminars – this course was established long before the 2000s, but its content has been recently updated).

With these successful efforts, the country has ensured that training on adolescent health and development is available in both pre-service and in-service education. Thus, a progression across this spectrum of education is possible to ensure lifelong learning. It was not an easy or obvious process; the factors that contributed to success included the following.

- Engaging top university decision-makers was essential to gaining formal approval and integrating the adolescent health course into the university curriculum for continuous professional development.
- The "Neovita" National Resource Centre for Youth-friendly Health Services provided the base for residents and practitioners' practical training in adolescent health care.

Box 8. (cont)

- Providing faculty staff from key departments with state-of-the-art training in adolescent health was an important factor in building understanding that adolescents are not simply older children or younger adults.
- Holding biannual national conferences on adolescent health provided the opportunity to bring together professionals (academics, practitioners and policy-makers) working for adolescent and youth health in the Republic of Moldova to share scientific and programmatic advances.
- Having longer-term financial support from the project Healthy Generation – Scaling up of Youth-friendly Health Services in the Republic of Moldova, financed by the Swiss Agency for Development and Cooperation, made it possible to sustain and expand initial investments in building institutional capacity for adolescent health training.

Source: adapted from AA-HA! (1).

Table 5 illustrates a range of evidence-based interventions, acting at various levels, designed to reduce morbidity and mortality associated with violence affecting young people (also see 40).

Table 5. Interventions to eliminate youth violence

Level	Intervention	Further explanation
Structural	Reduce access to and misuse of firearms	Programmes may require new legislation, additional police to supervise implementation, public awareness campaigns and more elaborate monitoring systems.
	Reduce access to and the harmful use of alcohol	Regulate the marketing of alcohol to adolescents; restrict alcohol availability; reduce demand through taxation and pricing; raise awareness and support for policies; and implement interventions for the harmful use of alcohol.
	Financial incentives to attend school	Money is granted on a per-student or per-family basis, and is tied to 80% or higher school attendance. Grants may cover direct costs (e.g. school fees and supplies) and opportunity costs (e.g. when families lose income from child labour).
Environmental	Spatial modifications and urban upgrading	For areas with high levels of violence, situational crime prevention includes a security assessment, a stakeholder analysis, and a planning process involving communities, local government, and housing, transport and other sectors.
	Poverty de-concentration	These strategies offer vouchers or other incentives for residents of economically impoverished public housing complexes to move to less impoverished neighbourhoods.
	Hotspot policing	Police resources are deployed in areas where crime is prevalent. Mapping technology and geographic analysis help identify hotspots based on combined crime statistics, hospital emergency records, vandalism and shoplifting data and other sources.
Organizational	Demand- and supply-side interventions for drug control	Drug control may focus on reducing drug demand, drug supply or both. Most interventions require substantial technical capacity within health services and the police force.
	School-based bullying prevention	Teachers are trained to recognize and explain bullying to students, what to do when it occurs, effective relationship skills and skills for bystanders. Specialists work with students involved in bullying. School policies and procedures also may be established and parents may be trained

Level	Intervention	Further explanation
Community	Gang and street violence prevention interventions	This may focus on reducing gang enrolment, helping members leave gangs and/or suppressing gang activities. Community leaders are engaged to convey a strong message that gang violence is unacceptable. Police involvement, vocational training, and personal development activities may also be included.
	Community- and problem-orientated policing	The systematic use of police-community partnerships and problem-solving techniques identifies and targets underlying problems to alleviate violence. Necessary preconditions are a legitimate, accountable, non-repressive, non-corrupt and professional policing system, and good relations between police, local government and the public.
Interpersonal	Parenting programmes	Goals are to promote parental understanding of adolescent development and to strengthen parents' ability to assist their adolescents in regulating their behavior.
	Home visits	Home visiting programmes monitor and support families where there is a high risk of maltreatment (e.g. families living in highly deprived settings).
	Peer mediation	Peer mediators may be nominated by a class and receive 20–25 hours of training on how to mitigate peer conflicts and seek help if needed. Other students may also be trained in conflict resolution skills.
	Dating violence prevention	School-based or after-school participatory activities address the characteristics of caring and abusive relationships; how to develop a support structure of friends; communication skills; and where and how to seek help in case of sexual assault.
Individual	Life-skills development and social and emotional learning	These age-specific programmes help adolescents to understand and manage anger and other emotions, show empathy for others and establish relationships. They involve 20–150 classroom sessions over several years.
	After-school and other structured leisure time activities	Structured leisure time activities can include cognitive and academic skills development; arts, crafts, cooking, sport, music, dance and theatre; activities related to health and nutrition; and community and parental engagement.
	Academic enrichment	Adolescents are targeted through mass media, after-school lessons or private tutoring to help them keep up with school requirements and prevent them from dropping out of school.
	Vocational training	Vocational training for at-risk youth can have a meaningful impact on violence prevention if integrated with economic development and job creation. Ensure the capacity of training institutions, available technical equipment, existing cooperation with businesses and sustainable financing models.
	Mentoring	Volunteer mentors receive training on adolescent development, relationship-building, problem-solving, communicating and specific concerns (e.g. alcohol and drug use). A mentor shares knowledge, skills and perspective to promote an at-risk adolescent's positive development.
	Therapeutic approaches	Qualified mental health specialists or social workers work with individual adolescents on social skills and behavioral training, anger- and self-control techniques and cognitive elements (e.g. moral reasoning and perspective-taking to appreciate the negative impacts of violence on victims). Families and social networks of at-risk adolescents may also be targeted.

Source: adapted from AA-HA! (1).

Box 9 describes an illustrative case study of a cross-sector approach to preventing youth violence. See Annex 2 for further case studies featured in AA-HA!

Box 9. The Cardiff Model of violence prevention

Violence prevention is an essential aspect of adolescent health, as violence is one of the leading causes of death among young people. The health sector can play an important role in reducing violence among adolescents, as the Cardiff Model highlights.

The Cardiff Model, one of the leading programmes on violence prevention, was created by Jonathan Shepard, a professor at Cardiff University in Wales, United Kingdom. The Cardiff Model is an excellent example of cross-sectoral collaboration and the strategic use of information from the health sector to improve policing. It has helped to reduce the incidence of violence in Wales by 40% since its full implementation in 2001. Shepard found a disconnect between, casualty data and violent acts known to police on the one hand, and the violent acts recorded by hospital accident and emergency departments on the other hand. For example, the police were more likely to know about an attack on an elderly person than a young person presenting with injuries in the emergency room. This disconnect in information led to less efficient policing of areas of concentrated violence.

To address this gap, the Cardiff Model utilizes the sharing of anonymous health-sector information from emergency rooms with the police in real time. Partnerships for crime and disorder reduction were created between the staff of emergency rooms and the police to share information about the location and time of violent acts, weapons used and other relevant demographic information. This information helps the police aim their efforts to prevent violence. The police have new information on where they should be patrolling and also which bars and nightclubs are hotspots for assault injuries. A TED Talk by Shepard provides a detailed explanation of the Cardiff Model and the police's use of information from emergency rooms.

The Cardiff Model exemplifies the strategic role that information from the health sector can play in reducing violence. As highlighted in Shepard's TED Talk, information sharing with the police has led to not only more targeted policing of crime hotspots but also policy changes in the environments where violence is most likely. For example, emergency-room information first identified drinking glasses as weapons. As a result, bars in Cardiff started using plastic glasses. The success of the Cardiff Model has led to its being transplanted to other settings within the United Kingdom and to South Africa and Latin America; it has proved cost-effective in the long term.

While the Cardiff Model highlights the potential for violence prevention for all the population, it is particularly relevant for adolescents, for whom violence is a leading cause of death. To prevent violence among adolescents, information sharing between emergency-room staff and police is a vital method to target hotspots for violence, analyze which weapons result in injury in adolescents, and create appropriate policies to address the surrounding environment to reduce violence among young people.

Source: adapted from AA-HA! (1).

Phase 4. Monitoring and evaluation

4.14. Establish an evaluation team

Once plans have been drawn up and implemented, sustainable improvement in outcomes in adolescent health and well-being requires robust, objective data monitoring and critical assessment of efficacy. These steps are often overlooked in programme planning, but they are essential to identify whether actions have the intended effects and to inform future planning. These processes therefore need to be built in, and resources secured from the planning phase onward.

This cyclical process involves systematically collecting data on both health outcomes (e.g. rates of teenage pregnancy or measures of subjective well-being) and process variables that may be related as part of a wider system (e.g. changes in related policies/laws or resource availability). Indicators related to the European strategy can be found [here](#). Given the

differences in health and other factors within and between countries, it is also vital that the data collected can be disaggregated by demographic criteria, particularly age, sex and socioeconomic status.

4.15. Review and update

A mechanism should be developed to ensure regular review and update of the national strategy or action plan. The operational plan should be updated annually and the entire national strategy or action plan should have a fixed end date of about five years. After this date, achievements should be evaluated and a new strategic plan be developed, prompting a return to step 1.

Conclusion

All adolescents have the right to health (4). Working together, we in the WHO European Region can provide the conditions necessary to achieve this. This publication makes the case for action at the national level, and provides the international context for improving adolescent health and well-being. Section 1 outlines the rationale for investment in adolescent health and development, illustrating the short-, medium- and long-term improvements that can be achieved. It highlights key resources to act on adolescent health and well-being. Section 2 provides an overview of the leading causes of adolescent mortality and lost years of healthy life, illustrating stark contrasts within and between countries. Section 3 outlines a 15-step process to support policy and programme development for countries wishing to undertake the development of a national strategy or action plan on adolescent health, development and rights. Together, the arguments, findings, and process included inform decision-makers about trends in the Region and areas where they can affect change.

Endnotes

1. WHO defines adolescents as young people aged 10-19 years.
2. Figure 5 illustrates the relationship between family affluence and soft drink consumption. The chart shows whether the prevalence of soft drink consumption is associated with increased or decreased higher family affluence, the extent of any difference.

The figure shows that the proportion of young people taking soft drinks daily in Albania, Romania, Moldova, Ukraine and Estonia is higher among those from families with higher affluence, as denoted by the bar(s) being above the 0% line (that is, being positive). This positive linear trend is statistically significant in boys and/or girls, as shown by the bars being shaded blue for boys and pink for girls. The height of the bars shows the extent of the difference between high- and low- affluence groups only, but statistical significance is based on linear trend across all three family affluence groups. In this case for example, the proportion of boys taking soft drinks daily in high-affluence families in Albania is almost 15 percentage points higher than in those of low affluence. Bars shaded grey denote that there is no statistically significant linear trend across family affluence groups for the indicator (dark grey for girls, light grey for boys).

See the HBSC international report (23) for further examples of international differences in the association between family affluence and health indicators.

3. A strategy describes how goals for child and adolescent health can be achieved through objectives, but is less specific than an action plan, which describes what will change, when it will happen, and who will make it happen. An action plan can be part of a strategy or a stand-alone document.
4. Specific tables listing interventions by ecological level and topic can be found in the within section 3 of the AA-HA complete document (1):
 - General table summarizing evidence-based adolescent health interventions and the conditions they target (Table 3.1, p.33)
 - healthy diets (Table 3.5, p.57)
 - physical activity (Table 3.6, p.58)
 - tobacco use and exposure (Table 3.7, p.59)
 - adolescent suicide (Table 3.8, p.67).

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Annex 1.

Sub-region Country Grouping

Group label	Description	Countries
CIS	Commonwealth of Independent States	Azerbaijan, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Republic of Moldova, Russian Federation, Tajikistan, Turkmenistan, Uzbekistan, Ukraine
SEEHN	South-eastern Europe Health Network	Albania, Bosnia and Herzegovina, Bulgaria, Israel, Montenegro, Republic of Moldova, Romania, Serbia, North Macedonia
EU15	Member states that belonged to the European Union before May 2004	Austria, Belgium, Denmark, Germany, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom
EU13	Member states that joined the European Union since May 2004	Bulgaria, Croatia, Cyprus, Czechia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia
Countries without specific group membership	Countries that do not belong to any of the groups specified in this table	Andorra, Georgia, Iceland, Monaco, Norway, San Marino, Switzerland, Turkey

Annex 2.

Case studies

Case studies from countries in the WHO European Region for can be found in the AA-HA! materials, listed below with their relevant section or through their case study numbers (1,2); and in English and Russian through the WHO Regional Office for Europe (3).

AA-HA! case studies include:

- AA-HA! Section 4:
 - Case study 11. Scotland's action framework and policy landscape analysis to improve young people's health;
- AA-HA! Section 5:
 - Case study 14. England's teenage pregnancy strategy;
 - Case study 16. The Republic of Moldova's addressing of adolescent health and development in state medical university curricula;
- AA-HA! Annex 3:
 - Case study A3.4. Sweden's national programme to provide school meals to all students;
 - Case study A3.10. The Russian Federation's mentoring programme;
 - Case study A3.11. The former USSR's strict alcohol regulation;
- AA-HA! Annex 5:
 - Case study A5.3. Portugal's healthy schools programme;
 - Case study A5.4. Turkey's multisectoral action on drug dependence;
 - Case study A5.10. Kyrgyzstan's youth-centred care;
 - Case study A5.16. Wales' Cardiff Model of violence prevention;
 - Case study A5.18. Scotland's youth pregnancy and parenthood strategy governance;
 - Case study A5.20. Ukraine's school-based substance-use- prevention curricula;
- AA-HA! Annex 6:
 - Case study A6.1. Lithuania's use of routine data to monitor the effect of a Year of Sobriety;
 - Case study A6.2. England's monitoring and evaluation of its national teenage pregnancy strategy

Case studies that are related to the Health behaviour in School-aged Children (HBSC) study and are available from the WHO Regional Office for Europe (3) include:

- Getting the picture in Armenia:
- Creating a strategy for pregnancy and parenthood in young people in the United Kingdom;
- Tackling mental ill health in Sweden;
- Taxing alcopops in Germany;
- Advancing the fight against sugar in Latvia;
- Faster, higher, stronger: increasing physical activity levels in the Russian Federation.

In addition, the Regional Office offers information on [youth clinic networks in Estonia](#) (4) and other [case studies](#) on adolescent health (5).

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The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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World Health Organization Regional Office for Europe

UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark
Tel: +45 45 33 70 00 Fax: +45 45 33 70 01
Email: eurocontact@who.int
Website: www.euro.who.int